

From boatanchors@theporch.com Mon Nov 4 12:49:14 1996
From: 4CX250B@miavx1.acs.muohio.edu
Subject: 6kHz AM Filter Mod for 51S-1
Message-ID: <v03007804aea3e686713e@[134.53.5.143]>

I installed an 6kHz mechanical filter in my 51S-1 last night, and since there have been some inquiries about this topic lately I thought I'd pass along my observations.

The 51S1 is supplied with two coupled 500kHz IF transformers for AM selectivity, providing a bandwidth of about 16kHz. A factory service bulletin provided for a user-installed 6kHz mechanical filter for AM use under QRM situations. The modification, which the factory estimated would take about 4 hours, consisted of cutting the three leads to the IF cans (input, output and ground), removing the coupling capacitor and the cans from the chassis, and covering the holes with little aluminum plates. According to the bulletin, a 6kHz mechanical filter is then secured with a cable clamp underneath the chassis in the area below the removed IF cans. The cable clamp is mounted on a 1/4 inch standoff, using one of the mounting holes for the cable clamp, and the wires are resoldered to the input and output pins on the filter. To resonate the filter, 51pF capacitors are soldered across the input and output terminals.

In installing my filter, I decided it best not to remove the original IF cans, since I wasn't 100% certain the mechanical filter would work, and I didn't have the little Collins-supplied cover plates for the holes. I therefore clipped the leads to the IF cans, but left the cans in place. I then mounted the cable clamp for the filter on a shield plate which separated the input and output wafers of the mode switch. I used an existing ground lug hole for mounting the cable clamp, using a 3/8 inch standoff. The rest of the installation was as in the factory bulletin. The whole procedure took about 2 hours, about half of which was spent thinking about alternative mounting options.

The resulting performance is as expected. There is no noticeable passband ripple, and the response falls off rapidly at 6KHz. AM sounds great on the filter, better actually than I expected. I think it is a very worthwhile mod, for a very reasonable price, and can be reversed easily if necessary. The mechanical filter is available from Fair Radio Sales for \$40, or from Surplus Sales of Nebraska for \$300. Take your choice.

Tonight, before buttoning up the 51S1 in its cabinet, I plan on installing a current-limiting thermistor in the AC line to limit startup surge current, and an MOV across the primary of the power transformer to clamp the turn-off inductive kick which tends to be hard on the on/off switch. I'll also check to make sure the rectifier diodes are all good, since I've heard reports about failures going unnoticed and eventually frying the power transformer.

73,

Jim W8ZR

From boatanchors@theporch.com Mon Nov 4 22:10:39 1996
From: JOHN_SEHRING.parti@ecunet.org
Subject: AM SUPER POWER
Message-ID: <9611041400.aa25008@pcusa01.ecunet.org>

I think that the nail's been hit right on the head on this.

Hi-fi means no reduction in frequency response, no compression, no limiting--i.e. perfectly linear transmission, reception & reproduction.

But this is only appropriate in an environment, like your living room, where the signal to noise ratio is nice and high. You can even hear someone whispering.

But this is not the case on the ham bands. They are very noisy. Whispers would be inaudible. Soft sounds would be drowned out by the noise.

A lot of QRN and QRM has a low pitch. So, first, you filter out the sounds below 300 Hz or so on your receiver (and then why bother transmitting them?) as that doesn't effect speech intelligibility.

Then, you artificially boost the less loud spoken sounds to make them almost as strong as the loud sounds using some form of compression.

You clip (limit) the positive peaks to some maximum value to avoid overload of your AM modulator.

You also clip the negative modulation peaks to -100% as a kindness to your neighbors on the band (to reduce splatter).

Other techniques can be used to increase the 'density' of speech sounds.

All this makes transmitted speech sound louder.

The above things can be done using anything from fairly simple (used by hams) to extremely complex (used by broadcasters) methods. The subjective quality of results range from sounding quite good to terrible! Short wave broadcasters seem to be the heaviest users of speech processing.

There are quite a variety of commercially-used speech processing techniques being used.

It's been long known that speech waveforms are highly asymmetric, i.e. the positive and negative waveforms are not the same in shape or amplitude.

This means that for a particular person, mic and transmitter combination, by getting the polarity of the modulating signal just right, you'll get the side of the speech waveform with the highest peaks to modulate the AM transmitter in the positive direction, which has less restriction on amplitude. (Q: Is this applicable to SSB too?) Yes, you *can* modulate AM more than 100% in the positive direction.

There are processors that take advantage of this fact. They instantaneously (from audio cycle to cycle) rearrange the audio waveform to get the stronger peaks all pointing in the positive direction.

Kahn's 'Power-Side' uses a form of full carrier with single sideband (no kidding!) to get more loudness & reduce the effects of QSB.

Compression can also be gotten from a combination of amplitude compression and quadratic phase dispersion.

Yes, a carbon mic, by virtue of its fortuitous non-linearities, can accomplish some of this all by itself. The famous D-104 is also favored for the same reason. No, it ain't hi fi, but what good is fidelity if you can't hear anything?

-John Sehring (11/02/96 4:29 pm MT @Baker, Montana) UCC wb2eqg

From boatanchors@theporch.com Mon Nov 4 22:10:39 1996
From: "Bob Ragain, 303-470-2534, RAGAIN@SEDALIA.OMNES.SLB.COM"
<RAGAIN@hubvx6.sedalia.wireline.slb.com>
Subject: AN/PRM-10 grid dipper
Message-ID: <961104170843.25058eb2@hubvx6.sedalia.wireline.slb.com>

Fellow BA'ers:

I recently bought a "parts" AN/PRM-10 grid dipper at a hamfest. Regretably the complete chassis inside the main box was gutted (ps, modulator, etc) :-)

The meter was removed from the oscillator head but otherwise the rather exotic control head looks ok, including the 955 osc tube.

Does anyone happen to have an AN/PRM-10 junker that has a complete main chassis but with bad/missing oscillator head?? If so, let's get together.

Hate to see this control head go to waste.

I do have an operational AN/PRM-10 and this is a great old BA grid dipper that has enough power to "dip" a straight piece of wire. Can't do that with one of the whimpy SS boxes!

I'm also looking for a manual for AN/PRM-10.

Thanks,

Bob

From boatanchors@theporch.com Mon Nov 4 22:10:39 1996
From: Robert Nickels <ranickel@mwci.net>
Subject: Another forgotten oldie
Message-ID: <327E9F9C.4FA2@mwci.net>

Hi All,

Ran across a flyer from another old-tyme BA peddler:
R.E. Goodheart Co. Inc., Beverly Hills CA (90213!)
The date is 1973, and the flyer features SP-600JX, "completely overhauled and alligned and prettified as to appearance and grtd 100% OK - \$275.00".

Among the other offerings: R-390A/URR at \$595, "Come back the next day and turn on the power and there it is, no retuning".

R-388/URR - "Same as Collins 51J2 (sic) overhauled and aligned, with top cover or cabinet (our choice) and photocopy of book - \$325.00"

CV/591A/URR Sideband Converter "Net wt. 24 lbs, Packed wt. with book, figure 50 lbs. \$137.50." (Musta been a heavy book!)

AN/WRR2, AN/ALR5, Eddystone 770, panadaptors, etc.

Anyone got a time machine? Or can anyone tell us what it was like to stroll through their warehouse filled with such exotic goodies?

Still dreaming...

Bob KE0T
ranickel@mwci.net

And, just to tease me, R-389/URR with book, \$450.00!

From boatanchors@theporch.com Mon Nov 4 22:10:39 1996
From: W7FG <w7fg@eigen.net>
Subject: ATTN: Military collectors
Message-ID: <199611050216.UAA16362@newton.eigen.net>

Individual listed here has a large number of Military radios for trade,
NOT SALE. You can obtain a list of his inventory by sending him a 3.5" Disk
along with two 32 Cent stamps. He will copy his inventory on the disk
and return it to you.

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NOTE: The printed list is too large for distribution.

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From boatanchors@theporch.com Mon Nov 4 12:49:14 1996
From: Bill Sorsby <bill.sorsby@dlep1.itg.ti.com>
Subject: CE-100V Questions and Report
Message-ID: <199611041838.MAA11684@lesol1.dseg.ti.com>

Greetings,

I managed to come up with a few questions while busily working on the very
dirty and lightly rusted (but complete) CE-100V I acquired a couple of weeks
ago:

1) What is a suitable replacement for the 6 mfd electrolytic caps in the
modulator? I found one open and the documentation I've got doesn't provide
specifics on this part other than 6 mfd at 50 volts. Since notes indicate
this capacitor to be failure prone, I'm considering replacing the network of
four with 5.6 uf metallized polyester capacitors. Anybody on the list had
to repair these things? Should I do this or try to find some originals

(which would still be failure prone)?

2) How does one get the second (metal) VFO knob off? Am I missing an obvious trick here? There are no setscrews (that I've found) and disassembling the bearing assembly within doesn't seem to help either. While I've disassembled much of the rest of the 100V, the VFO remains mounted to the front panel because I just can't figure out how to get the silly knob off. While I don't plan to disassemble the VFO, I had expected to take it loose from the front panel in order to clean the panel and dial assembly. Any suggestions appreciated.

3) My 100V has the rectifier tubes replaced by solid-state plug-ins. My first thought was to reinstall the two 6AU4's and the 5U4. Upon reflection I wonder how wise this would be though. Judging from the fact that CE put in a mirrored heat shield between the rectifier tubes and filter capacitors and also installed a fan on the power transformer it appears that the 100V had a heat problem involving the rectifier tubes. Anybody on the list been down this road before willing to offer suggestions?

4) Is there a good alternative for the limiter batteries? A previous owner removed the batteries from mine, but not before some corrosive leaked. (Damage appears to have been limited.) After reading reports about the merits of the limiter, I'd like to use it but have doubts about the wisdom of reinstalling batteries.

RESTORATION PROGRESS:

I had to undergo a paradigm shift before starting work on this 100V. My normal repair mode is to find and repair specific problems rather than to rebuild. However, this 100V was enough of a mess that I opted to disassemble it, give the constituent pieces a bath and resolve obvious mechanical and electrical problems before applying power to the unit.

The recurring thought which has kept coming to mind regarding this 100V is that it's a "diamond in the rough". Because the front panel is aluminum, it didn't suffer the rust which much of the mounting hardware had. The panel shows slight wear on some of the silkscreening but is otherwise in excellent condition. Even the knobs will clean up nicely, although there's very slight corrosion of the aluminum skirts. The cabinet is another matter. I'm not sure at this point whether total repainting of the cabinet will be necessary or not, as it is very dirty and has some rust and some missing paint.

I spent a fair part of the weekend working on this 100V which is now mostly disassembled into its half-dozen or so subassemblies. So far I've managed to clean up the audio/modulator and power supply sections. Cleaned for hours, first wiping the grunge off and then using Q-tips and alcohol to get the little stuff. Things on both chassis look a lot better now, but still look a little rough. Unfortunately, a lot of the symbolization used by CE

on the audio/modulator chassis mostly wiped right off before I even used alcohol! The accumulated grunge (which included lubricating oil from the power supply fan) had already largely dissolved the ink which I'm guessing was water soluble. One of the 6 uf modulator caps showed to be open. (And no, it wouldn't reform. I tried.) Also, it looks like the limiter will need additional work due to the battery corrosion. All the electrolytics reformed just fine, although I have no doubt that one of the big 250 ufd's in the HV supply would have self-destructed if it had not been reformed first. Put in an in-rush current limiter along with a 3-wire line cord.

The next part of this restoration will be cleaning up the RF sections which, because of the bandswitching, will be dealt with as one piece. Partial disassembly is called for, such as removing the large U-shaped partition (and shield) surrounding the two units. For some reason, the PA section has about the worst rust in the entire transmitter. The meter pots for example have been nearly eaten up with rust and require replacement (whether or not they might actually function).

As a minor note, I'll mention that this 100V had a 15.5 MHz crystal installed in the CX6 position. You 100V owners might recognize this as the correct crystal for 160 meters. Naturally, I checked the complement of coils to see if in fact this 100V supported 160 meter operation using the band X position. What I found was that none of the low level RF coil plug-ins contained 160 meter coils, nor was there a 160 meter coil in the PA compartment. Oh well...

Regards,
Bill Sorsby, N5BU

bill.sorsby@dlep1.itg.ti.com
Views expressed herein are no one's fault but mine.

From boatanchors@theporch.com Mon Nov 4 22:10:39 1996
From: integrat@usr.com (Integration Area)
Subject: Copy of TBA-11 manual up for grabs
Message-ID: <27E69490.3000@usr.com>

I have an extra copy of GEI-19245 "Preliminary Instruction Book for Navy Model TBA-11 Radio Telegraph Transmitting Equipment" that I received in a recent deal. I have real manuals for the beast, and a photocopy for kicking around. I really do not need a second work copy.

The TBA-11 is a real monster (put two TBKs back to back, then add a thing on the top. T'aint a lightweight.), capable of 1 kW at 4-26 MHz CW.

If anyone desires to have a rather light reproduction of the manuals for postage or whatever, speak up (rules of Ware apply).

William Donzelli
integrat@usr.com

From boatanchors@theporch.com Mon Nov 4 12:49:14 1996
From: KA9EGW@aol.com
Subject: Eastwood Web Address
Message-ID: <961104062856_1680239264@emout20.mail.aol.com>

For engine-turning kits, cadmium plating restoration paint, wrinkle paint and a bunch of other kewl stuff, their address is

<http://www.eastwoodco.com/>

73, Brian
KA9EGW

From boatanchors@theporch.com Mon Nov 4 22:10:39 1996
From: lkayser@rideau.net (Larry Kayser)
Subject: Engine Turning & Crystals, Japanese / Chinese
Message-ID: <199611050402.XAA06253@mail.peterboro.net>

Greetings:

Thanks to all who replied on the Engine Turning thread. I will search the last 600 or so digests and find the earlier references, and I really appreciate all the input from so many of you. I had wondered how to make the pattern uniform and consistent, the milling machine approach is excellent. I have enough information to do the project now.

Crystals and museums for BA stuff.

I have come to have concerns about Museums in general. I find their displays provide minimal information and that they frequently have very interesting and significant material that never gets displayed at all. For my part I try to refer things to serious collectors rather than see good stuff on the warehouse shelves of Museums. I happen to have the crystal collection of Howy, w2qhh (now SK) here, it is made up of his collections built up over many years, Pre and Post WW II. I will make sure it is passed on to someone who will appreciate it and help to keep it growing. I have

added about 30 of my own crystals to it as well. For my part I would not be returning anything to a Museum today, look around for a keen collector who at least will research the items and add information and value about them. Just my two cents worth....

Larry
va3lk / wa3zia

From boatanchors@theporch.com Mon Nov 4 22:10:39 1996
From: y4562@csra.net (Larry Louie)
Subject: Explain the Process of Reforming Caps
Message-ID: <199611050334.VAA03633@uro.theporch.com>

I have read on the boatanchor net the process of reforming electrolytic caps during the restoration process of old equipment. Could someone explain the process and why its done? Sounds like old electrolytics need to have voltage raised gradually or in steps to ensure no damage occurs to older, not operated for a long time equipment circuitry??

Would appreciate any explanation one could offer.

Thanks in advance to any boatanchor members for their help.
lllllllll

From boatanchors@theporch.com Mon Nov 4 12:49:14 1996
From: Dave Metz <metzd@cfw.com>
Subject: FS: BC 728 Receiver
Message-ID: <2.2.32.19961104115306.007023d4@milo.cfw.com>

This unit has pretty rough paint on the outside but relatively nice on the inside. Vibrator supply is there and it seemed to work the last time I put some juice to it several years ago. No manual but schematic copy is in the lid . If interested, please make offer . I know I'll never have time to get at this one and it should be in the hands of someone who likes the portable/mobile stuff ! I won't be able to respond to any potential offers till after Tues night.

Thanks,

dave

From boatanchors@theporch.com Mon Nov 4 22:10:39 1996
From: Steve Ellington <n4lq@iglou.com>
Subject: FS: COLLINS 32V3
Message-ID: <Pine.GS0.3.95.961104215834.24665A-100000@iglou1>

32V3

Works beautifully AM-CW

Complete, original, no mods.

DowKey relay on back for antenna switching

Beautiful cw keying.

Inside, all the original shielding is in place, tubes good, puts out 100w plus. Modulation sounds excellent

Asking for best offer over \$700.

Email for more details if interested.

Steve Ellington N4LQ@IGLOU.COM Louisville, Ky

From boatanchors@theporch.com Mon Nov 4 12:49:14 1996
From: anders@autopsy.corp.sgi.com (Greg Anders)
Subject: Globe King Problem found...
Message-ID: <9611040736.ZM940@autopsy.corp.sgi.com>

My thanks to everyone who provided tips on the modulator problem in my 500B. The "spike" modulation I saw was caused by a defective plate cap solder joint on one 816 HV rectifier in the modulator. Cleaned and reflowed the solder and sh works like a champ....

Thanks again,

Greg KG6YV

From boatanchors@theporch.com Mon Nov 4 12:49:14 1996

From: Chuck Penson <penon@sci.mus.mn.us>
Subject: Heath AR-2 book needed
Message-ID: <327E04CF.264B@sci.mus.mn.us>

If you have one of these I would be happy to pay for a copy.

Thanks!

--

Chuck Penson
WA7ZZE

penon@sci.mus.mn.us
612.221.4510 voice
612.224.5092 fax
<http://comped.sci.mus.mn.us>

Standard Disclaimer: The opinions expressed are etc. etc. ...

"Nothing is too wonderful to be true" -- Michael Faraday

From boatanchors@theporch.com Mon Nov 4 22:10:39 1996
From: Stanley Siegel <SIEGELS@turing.law.nyu.edu>
Subject: Re: High Powered AM -Reply
Message-ID: <s27e0c91.007@turing.law.nyu.edu>

If you don't mind distinctly non "hi-fi" sound, one very effective speech processor for AM is the old Vomax (or Alpha-Vomax) split-band processor. That divides speech into four bands, amplifies and hard limits each band, and recombines after filtration. It operates at the mike input level, and it works extremely well. The sound out the other end is sharply limited to the range 200-3000 hz, so that beautiful, deep, AM bass response is gone -- and along with it, the communications power is tripled or quadrupled.

I have one of those units, which I have modified slightly with increased power supply filtering, and I think it's outstanding (and I'm keeping it!). They may still be out there, in the \$100 range or so.

73, Stan W6TJS

From boatanchors@theporch.com Mon Nov 4 12:49:14 1996
From: Dave Wood <WB4KPD@coastalnet.com>
Subject: HQ-110
Message-ID: <199611041301.IAA09902@abaco.coastalnet.com>

Hey gang, just aquired a very nice HQ-110. Much cleaner cosmetically than electrically. The 2.58Mhz second lo xtal is defective along with the antenna trimmer capacitor. Was wondering if anyone had a junker unit that might yeild these parts. Thanks in advance! Dave

From boatanchors@theporch.com Mon Nov 4 22:10:39 1996
From: "Manuel A. Maseda" <mmaseda@gte.net>
Subject: IERC Tube Shields
Message-ID: <327E3F96.339B@gte.net>

Does anyone know if new IERC tube shields are still available for anyone. I know Fair Radio has some used ones but I'd like to find a new source.

Thanks,

Manuel WF1J

From boatanchors@theporch.com Mon Nov 4 12:49:14 1996
From: integrat@usr.com (Integration Area)
Subject: Re: IMPERIAL JAPANESE NAVY CRYSTALS
Message-ID: <27E23FB0.3000@usr.com>

I have a few old crystals with oriental script on them as well, found in a similar junkbox at the Grayslake fest a few years ago. I can not tell if they are Japanese or Chinese. If someone can help Mr. Stinson out with his crystals, I would gladly scan the boxes and cases of mine in hopes of IDing them and getting them to the right folks.

William Donzelli
integrat@usr.com

From boatanchors@theporch.com Mon Nov 4 12:49:14 1996
From: wi2p@VNET.IBM.COM
Subject: Re: Johnson Thunderbolt, RF Amps in general
Message-ID: <199611041443.IAA21611@uro.theporch.com>

The saga continues: Thanks to the several who have offered suggestions over the weekend.

The following is in response to several of those comments:

Actually, the amp seems to act up only in AB1. I can run it class C with no problem. I've gone thru the manual process to neutralize the amp (full output on 20 meters, adjust neutralizing cap until grid current dips as the plate is tuned on each side of resonance). Class C seems to work fine. This is running the same voltages on the screen and plate (2200v plate, 540v screen) and blocking bias at -150 volts. There is a switch on the front of the amp that allows you to select CW (class C), TUNE (-75v bias and 375v screen) and LINEAR (Class AB1, -75v bias and 540v screen). Tune works fine as well. It's only when I switch to LINEAR with the 540v on the screen and turn off the blocking bias (relay controlled by exciter switches from -150 to -75) does the amp take off. Plate current slowly starts to rise, then rapidly shoots past the 250 recommended static current up to whatever, if I didn't quickly shut it off by flipping the blocking bias back on. The procedure to check the static current is to remove the RF excitation from the amp (I've additionally shorted it thru a 50 ohm resistor at W8ZR's suggestion, although the manual itself does not say anything about shorting the input, just says disconnect the excitor from the rf input jack), key the excitor to turn on the operating bias, and the static current should be between 200 and 300ma. Mine goes to 380ma with maximum plate loading cap/inductance, and rapidly increases if the plate tuning is changed. Changing the neutralizing cap also causes an increase in plate current. I've tried this with each tube by itself as well as having them both installed.

I'm gathering up a set of high wattage resistors to try and control the screen voltage and find out just what value makes it take off. Figure if I can find a voltage between 375v, where it works fine, and 540v where it goes bananas, I can at least have a few seconds of time to determine just what freq it's oscillating at. Haven't had any success using the GDO to look for resonant circuits anywhere in the grid or plate areas yet.

I'm open to any and all suggestions!

73, Ray WI2P wi2p@vnet.ibm.com

From boatanchors@theporch.com Mon Nov 4 22:10:39 1996

From: 4CX250B@miavx1.acs.muohio.edu

Subject: Johnson Valiant -- W6BM Audio Mod

Message-ID: <v0300780aaea40308243f@[134.53.5.143]>

Hi Gang,

I've had several inquiries since I mentioned a week ago that I was planning on installing the W6BM audio modifications in my Valiant 1. I completed the modification on Sunday, and spent the afternoon getting audio reports. Here are my impressions of the modification:

1. Background: The original Valiant audio stages are universally agreed to be poorly designed. As documented by many users, the frequency response was quite restricted (little bass response), and there was significant distortion. The 6AL5 clipper is held in especially low repute.

Numerous hams have proposed improvements to the Valiant over the years. In fact, I would hazard that nearly all Valiants today have altered audio stages. Of ten the improvements are limited to increasing the coupling capacitance between stages in order to widen the frequency response, and to bypassing the dreaded 6AL5 clipping circuit. These simple changes will significantly improve the audio characteristics from the original, but still fall short of the best audio the rig is capable of.

A few years ago (sorry, I don't have the exact date), John W6BM published an extensive critique of the Valiant audio system in Electric Radio. In his modification, John analyzed the stage-by-stage gain and frequency response. He changed bias resistors, coupling capacitors and plate load resistors for some of the stages. He removed some of the sources of distortion by removing d.c. from an interstage coupling transformer, and by introducing feedback from the secondary of the modulation transformer to the cathode resistor of a 12AU7 audio driver. I believe John's modification to represent the best of the suggested improvements, and he is famous among Valiant aficionados.

2. Installing the W6BM Mod: This is a lengthy project, and I estimate it took me about 15 hours to complete it. After trying some piecemeal substitutions of components, I finally gave up and stripped out the audio circuits down to the bare tube sockets. I cleaned all the pins and terminal strips, sucked up all the solder from everything, and started to rewire. I installed the feedback circuit last of all, so I could check each stage separately before applying B+ to the 6146 modulator tubes. I had all the components in my junkbox, except for a 0.1uF feedback capacitor, which needs a voltage rating of 1000V. The largest I had were 600V Orange Drop capacitors, so I eventually ended up using three 0.33uF 400V capacitors in series. Inelegant, but it worked.

When I turned the Valiant on for the first time, I immediately smelled a resistor burning. This turned out to be the 4.7K plate load resistor for the 12AU7 audio driver. I had used a 1/2 Watt resistor, but a quick measurement showed that 100V was being dropped across it, corresponding to 2 Watts dissipation. I substituted a 5Watt resistor and it worked fine. I am a little concerned that John's circuit pushes the 12AU7 a bit hard. I calculated that the tube is drawing 21mA of plate current (both sections combined), which is right on the edge of its ratings. If I discover that I'm losing 12AU7s, I may raise the plate load and cathode resistance somewhat to cool it down.

When I hooked up the feedback circuit and turned on the modulators, the audio stages immediately started oscillating. I exchanged the plate caps on the 6146 modulators, thus turning positive feedback into negative feedback, and the problem went away. Even with the feedback circuit hooked up, however, I felt that there was too much overall gain in the system --

at least with my D-104 mike. I changed the feedback resistor to 1000 ohms and that calmed it down a bit. I now run the mike gain at a comfortable 10 o'clock setting with a D104. I still can induce audio oscillation by cranking the audio level all the way up, so there is still gain to spare. Next time I tear into the rig, I may cut down the gain a bit more.

I don't have an audio distortion meter, but the sine wave waveform looks very clean. I swept the frequency response, and it is very wide and flat, with the low-frequency 3DB point around 60Hz. Following a suggestion in John's article, I installed a 2.5mH r.f. choke across the antenna connector, and it really cleaned up the oscilloscope pattern of the r.f. envelope. (The choke bypasses audio voltage on the r.f. tank). I also tried reversing leads on my D104, to see which configuration gave the largest positive modulation peaks. Frankly, I was not expecting to see any difference, but was amazed to find a HUGE difference. In the original lead configuration, the positive peaks were small, and the rig easily went into negative cycle overmodulation. Reversing the leads made for much punchier audio.

My final change to John's circuit was to add a small amount of negative cycle loading to the modulation transformer. I series-connected three 1000V 1A diodes and a 4000 Ohm 5 Watt resistor across the secondary of the modulation transformer (anode connected to the B+ side of the secondary). The resistor will tend to hold down wide voltage swings across the secondary when the rig hits 100% negative cycle overmodulation. Having heard many swap-net requests for replacement modulation transformers, it seems like a wise precaution. A 1000 ohm resistor would probably be better, but you'd need a 20 Watt resistor.

3. Operating Impressions: Audio reports have really been gratifying. The 75 meter AM crowd in this area is quite knowledgeable, and they've been uniformly complimentary of the sound. There is lots of "punch" to the audio, and I'm told it sounds quite natural.

As an experiment, I tried using the 6AL5 clipper circuit (modified slightly with larger coupling capacitors to extend the frequency response), to see how well it worked with the W6BM mods. Nobody seemed to like the sound, so I ended up leaving it disconnected.

I would recommend the W6BM modification for any savvy ham to undertake. It's not a project for a beginner, however, since you'll undoubtedly have to make some component substitutions, and since you have to rewire essentially the whole audio circuit of the rig and don't want it to look like a rat's nest when you're done.

73,
Jim W8ZR

From boatanchors@theporch.com Mon Nov 4 12:49:14 1996

From: Tom.Daley@530.gigo.com (Tom Daley)
Subject: junque for sale
Message-ID: <517_9611031919@gigo.com>

hello ba people i have more junque to sell or trade. i am looking
for gonsets ! those items listed befor are now at reduced prices \$\$
all below plus shipping

1. hallicrafters s-38c poor shape. rust. complete/untested \$10
2. (2) triad c-47u filter reactor (choke) new old stock !!
.3hy@1a/30 ohms or .075hy@2a/75 ohms \$10/each or \$15/both
3. triad c-17x filter reactor (choke) new old stock !!
1.5hy@300ma/40 ohms \$7
4. triad n-4m stepdown autotransformer new old stock !!
230vac to 115vac 150va \$5 ***ALL 4 LISTED NOS TRIAD ITEMS \$20***
5. hp 130c o-scope good condx works but needs deoxit/cleaning with
rack mount handles. fair radio price "checked" \$150 my price \$25
6. crystal calibrator unit 301d1607 from military rx 1000hz xtal/oven
uses 2 12au7 tubes (missing) with short cable/plug untested \$10
7. jackson 648a dynamic tube tester. fair/good condition with
some grunge/dust from tech use. tested several tubes ok but
found it to be more stingee then my tv7u and wouldnt lite the
fil of 6146 up (needs some love and de-oxit). tested other 6v
tubes ok (616, 6sn7, 6au6). has built in roll chart with extra
updates with the newest dated 1974. \$35
8. heath io-103 o-scope complete fair condition. it does not work
as it has some wires lifted off circuits. sand state except crt \$10
9. hycon 627-r o-scope short rack mount in good/fair condition
no power cord or manual/specs. looks neat but untested \$10
- A. edl instruments inc 3 1/2" o-scope. fair condition - works but
needs deoxit. this is a compact sand state unit except crt !!
this was my rtty scope for many years - gotta go \$15

dont be shy with offers or trades ! located in sacramento 73 tom
--

: Fidonet: Tom Daley 1:203/530 .. speaking for only myself.
: Internet: Tom.Daley@530.gigo.com

From boatanchors@theporch.com Mon Nov 4 12:49:14 1996
From: "Paul Bock" <pauboc@smtplink.pulse.com>
Subject: Key restoration
Message-ID: <9610048471.AA847135911@smtplink.pulse.com>

To Jim, W8ZR, and anyone else contemplating "restoring" an older
key or bug:

Jim, from the description of your Presentation I think that just leaving it as it is would be fine unless you particularly want a "pristine" bug. Some wear/scratching on the gold-plated base top of a Presentation is pretty commonplace.

However, in the case of this particular bug bear in mind that it isn't "rare" (although every Vibroplex collection should have one, IMO) as many thousands were built between 1948 and the present. The only thing that really sets yours apart is that from 1948 until sometime in the '60s the mainspring was adjustable (as evidenced by two small screws in the top of the lever arm where the mainspring goes into the slot); this feature was dropped at some point in the '60s or later (not sure exactly when, but my '63, s/n 229273, still has it). That feature makes an older Presentation a little more of a "collectible" than a new one, but other than that there's little difference (the newest ones don't have a circuit-closing switch, of course).

So, having the gold plate replated isn't going to "destroy" the value of the bug, but bear in mind that you'll have to remove everything *including* the nameplate, then the rest of the base will have to be carefully masked off and the gold brush-electroplated to restore it. The plate is, unfortunately, glued down and I wouldn't even attempt to remove it from the base as I believe such a procedure might be risky. The replating will not be cheap if you go to a professional plater, and you will have to carefully explain what you want done.

If it was a question of a Deluxe with the chrome all bunged up, then by all means have it replated *if* the top parts are in really nice shape - in fact, I have a '41 Lightning Bug Deluxe which had all the top parts in beautiful shape but the base really badly scratched (looked like someone had taken steel wool to it). So I had the base re-chromed and now the bug is a real stunner.

Painted-base or japanned-base bugs are another matter. I would never redo a common painted or japanned base unless the bug was in really trashy shape and had key parts broken and/or missing, was *NOT* some rare or unique model, or was a late model with the common gray base that had simply been abused. For example, a pre-1940 painted-base Vibroplex with a *colored* base (red, blue, or green) should *NEVER* be "restored" regardless of the flaws in it - they're too rare! Just show it like it is. Same for an early Blue Racer with a blue base, or for a Junior or Zephyr - they're just too rare for that kind of restoration. Replacing missing parts with "look-alikes" of the original parts is OK (such as making new nickel-plated weights to replace missing ones), but *not* repainting of the base.

If you'd like to accurately date your Presentation, send me an e-mail and I'll put you in contact with the "expert" on dating Vibroplex bugs, although your "guesstimate" is probably pretty close.

73,

Paul, K4MSG

From boatanchors@theporch.com Mon Nov 4 22:10:39 1996
From: y4562@csra.net (Larry Louie)
Subject: Lawrenceville, Ga. Hamfest
Message-ID: <199611050229.UAA02121@uro.theporch.com>

My first Lawrenceville, Ga. Hamfest and it was very cold. Very nice tailgate turnout as well as tables under the large livestock barn. Decided to make it a family outing which rushed me a bit and only spent 4 hours on Saturday morning at the two day hamfest. Some brief observations:

Saw a nice SP600 in excellent mechanical and cosmetic shape but the old timer said it didn't work that sold for \$75 bucks. Not too many Collins 75S- and no 75A- radios. Talked to a guy who bought a box of new 4 x 40 mfd x 450 vdc electrolytic cans for \$5. Should have offered to buy a half a dozen or so from him as he seemed that he could spare them. These caps were on my list of items to buy! Bag of 100 - .022 mfd 450 vdc Sprague orange mylar caps for \$5. I was looking for and finally found an old Sprague T0-5 Cap tester with manual, good cosmetic condition but power cord was brittle and insulation was flaking from old age and non usage but the owner was not present so I layed it down. When I returned 5 minutes later it was gone and it was sold for \$15. Boy was I mad at myself for letting it go! Had to hold my self back for BC-221 freq meter for \$50 seemed too high for novelty equipment. I think a good freq counter function on multimeter would perform same function? Saw some like new TV-7 testers going for \$75. He also had selling separately military tube socket adapter kits in their own cases.

Saw an old MacIntosh 225 Stereo Amplifier. I was a little curious though why in the middle were the tubes should be were power transisters and heat sinks? The large black output transformers and large filter caps were still there. Was in a rush so I didn't get a chance to ask what happened here to a prime boatanchor tube amplifier! Would have bought it in a N.Y. minute if original and reasonably priced. Remember my friend duplicating the likes of this amplifier using 6L6's with the secret to low distortion... i.e. negative feedback from a schematic and article in Stereo Review Magazine! I still like the sound best from a good tube amplifier.

The the outdoor and tailgating part of the swap was definitely the best part

of this hamfest. This is true recycling at work where old owners who no longer find this equipment useful can pass them on to new owners who continue to extend the useful life of this old equipment. The indoor vendor booths inside was not much to speak of to me. I was a bit rushed to fully enjoy the hamfest though. Since this was a two day event bet there would have been some new treasures on Sunday as I think it was a much nicer day weatherwise than Saturday.

Can't wait for the next one where I going to take my time and not rush it.

11111111

From boatanchors@theporch.com Mon Nov 4 22:10:39 1996
From: Bob Roehrig <broehrig@admin.aurora.edu>
Subject: Re: Lawrenceville, Ga. Hamfest
Message-ID: <Pine.ULT.3.95.961104204201.15324D-1000000@admin.aurora.edu>

On Mon, 4 Nov 1996, Larry Louie wrote:

> My first Lawrenceville, Ga. Hamfest and it was very cold.
> hold my self back for BC-221 freq meter for \$50 seemed too high for novelty
> equipment. I think a good freq counter function on multitester would
> perform same function?

In this day and age, I don't know how many still use a hetrodyne freq meter for measuring frequency, but they make a good signal generator. Even though I have H-P synthesized RF gen, I still keep a BC-221 and another analog sig gen on hand for some jobs.

E-mail broehrig@admin.aurora.edu 73 de Bob, K9EUI
CIS: Data / Telecom Aurora University, Aurora, IL

From boatanchors@theporch.com Mon Nov 4 22:10:39 1996
From: "L. Mark Pilant - MS:ZK03-4/Y02 DTN:381-1529" <pilant@seesaw.ENET.dec.com>
Subject: Looking for Boonton 63H and 75B-S8 information
Message-ID: <9611042022.AA17150@us2rmc.zko.dec.com>

Well, I have two additions to my "home lab" :-) A Boonton 63H Inductance bridge and a 75B-S8 capacitance bridge.

I'm looking for some instructions and/or pointers to manuals. (I've started the search, but if someone knows where I can find them, that'd be great.)

The capacitance bridge appears to work, at least on the highest range. I don't have too much to test the lowest ranges. The function of some of the controls are obvious, others aren't.

The inductance bridge, on the other hand, I'm not sure about. I haven't spent too much time with it, but I'm not sure if the result were the result of my not know how the controls work/interact, or if there are problems with the unit. Again, the function of some of the controls are obvious, others ???

Thanks in advance.

73

- Mark N1VQW

From boatanchors@theporch.com Mon Nov 4 12:49:14 1996
From: lkayser@rideau.net (Larry Kayser)
Subject: Metal Finishing, Swirl Patterns, Help Please
Message-ID: <199611040249.VAA21393@mail.peterboro.net>

Greetings:

I would like to learn how the neat and orderly swirl patterns are made on aluminum surfaces. This was a fairly common surface finishing technique in the 1920's and 1930's, but has been very uncommon in the last 40+ years or so.

My only recollections were some comments on the use of burnt cork in some sort of rotary fashion, however this is only a recollection and has no basis in fact.

I have a conservator / restoration piece that could benefit from such a process to bring some luster to the metal surface. Despite pouring over some manuals I am unable to find a sample of this surface treatment technique.

Any input will be greatly appreciated.

Larry
va3lk / wa3zia

From boatanchors@theporch.com Mon Nov 4 12:49:14 1996
From: gpewitt@execpc.com
Subject: RE: Metal Finishing, Swirl Patterns, Help Please
Message-ID: <Chameleon.961103221857.gpewitt@execpc.com.execpc.com>

On Sun, 3 Nov 1996 20:47:49 -0600 (CST) Larry Kayser wrote:

>Greetings:

>

>I would like to learn how the neat and orderly swirl patterns
are made on

>aluminum surfaces.

>

Snip

The patterns known as jewelring, or damasiening, or engine turning are made by bringing a rotary wire brush into contact with the material to be finished in a series of overlapping circles. The process has been done with pencil erasers and grinding compound or with a piece of dowel rod, plastic, or hard rubber. It can be done on a drill press but it's hard to make a regular pattern without a guide fixture. I always used a milling machine. That makes it easy to obtain some very attractive patterns. You can make a fixture out of plywood and with a little practice get a beautiful finish on a drill press. Just don't try it freehand with an electric drill.

73 Gary

Name: Gary Pewitt N9ZSV

6120 W. Calumet Rd. Apt 204

Milwaukee, WI 53223

414 355 8147 Home 414 297 4307 Work

E-mail: gpewitt@execpc.com

From boatanchors@theporch.com Mon Nov 4 12:49:14 1996

From: Al Klase <alklase@prolog.net>

Subject: Re: Metal Finishing, Swirl Patterns, Help Please

Message-ID: <199611040330.WAA08118@ns1.ptd.net>

At 08:48 PM 11/3/96 -0600, Larry va3lk wrote:

>Greetings:

>

>I would like to learn how the neat and orderly swirl patterns are made on
>aluminum surfaces. This was a fairly common surface finishing technique in
>the 1920's and 1930's, but has been very uncommon in the last 40+ years or so.

>

Anchorites,

This subject came up a month or two ago, but I wasn't real happy with the explanation. The following is some sort of oral tradition from the dim past. I checked my machine shop books and found nothing.

The effect is call "engine turning" or an "engine-turned finish". It originates from the finish applied to precision metal parts by machine tools. Typically a part starts out as a rough casting that is machined to

it's final dimensions by a lathe or milling machine. It was common practice to give exposed flat surfaces a precision look by finishing them with an end mill (the cutting bit) in a vertical milling machine. The milling head is brought down to the final dimension. Then it's lifted and the work is moved over a fixed amount and the next vertical cut is made. It's easy to get an even pattern on a milling machine because the table "X" and "Y" controls are calibrated. (It's probably really easy on a modern numerically controlled machine!)

A pseudo-engine-turned finish can be applied to sheet metal using a drill press equipped with some sort of circular abrasive device like a wire brush or perhaps a cork or piece of wood charged with abrasive powder. The key is to have some way to easily and accurately index the work to produce the overlapping circles.

As I recall, there's a scene in the old "Spirit of St. Louis" movie where the Ryan aircraft guys are doing just this to the cowl of Lindburg's plane. Check it out in the Smithsonian.

That's about all I know.

73, Al

Al Klase - N3FRQ
alklase@prolog.net
Flemington, NJ

From boatanchors@theporch.com Mon Nov 4 12:49:14 1996
From: "D.D. Todd" <dube3@n-link.com>
Subject: Re: Metal Finishing, Swirl Patterns, Help Please
Message-ID: <327DA488.16AA@n-link.com>

Larry Kayser wrote:

>
> Greetings:
>
> I would like to learn how the neat and orderly swirl patterns are made on
> aluminum surfaces. This was a fairly common surface finishing technique in
> the 1920's and 1930's, but has been very uncommon in the last 40+ years or so.
>

Here is a method I learned in high school machine shop class 40-odd years ago:
Chuck up a wooden dowel of a diameter of the desired swirl in a drill press.

Spin the end of it on some 150-grit sandpaper at about 900 RPM until the end is squared off. Then apply jewelers' rouge to the end of the dowel and bring it lightly against the work. Try it on some scrap stock first so you get the feel of how much pressure to use and how long to spin it for the desired effect. It also will help you to practice doing the swirls with the right amount of overlap and in straight lines across the work.

I've heard of some people using toothpaste (not the gel type) instead of jewelers' rouge, but haven't tried that.

— —

Dube Todd K4DWW
dube3@n-link.com

If we had to tolerate in others all that we permit in ourselves, life would be completely unbearable.

- Georges Courtelline

From boatanchors@theporch.com Mon Nov 4 12:49:14 1996
From: KA9EGW@aol.com
Subject: Re: Metal Finishing, Swirl Patterns, Help Please
Message-ID: <961104061631_1181541018@emout09.mail.aol.com>

The Eastwood Company (I think it's <http://www.eastwood.com>, but I'm not sure) sells a kit to do this finish on sheet metal. It's called "engine turning".

From boatanchors@theporch.com Mon Nov 4 12:49:14 1996
From: "RUDOLF H. SALOMON" <rhs@pacbell.net>
Subject: Re: Metal Finishing, Swirl Patterns, Help Please
Message-ID: <327E0753.DA8@pacbell.net>

Larry Kayser wrote:

>

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> Greetings:
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>

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> I would like to learn how the neat and orderly swirl patterns are made on
> aluminum surfaces. This was a fairly common surface finishing technique in
> the 1920's and 1930's, but has been very uncommon in the last 40+ years or so.
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> My only recollections were some comments on the use of burnt cork in some
> sort of rotary fashion, however this is only a recollection and has no basis

> in fact.
>
> I have a conservator / restoration piece that could benefit from such a
> process to bring some luster to the metal surface. Despite pouring over
> some manuals I am unable to find a sample of this surface treatment technique.
>
> Any input will be greatly appreciated.
>
> Larry
> va3lk / wa3zia

Hi Larry, I was at one time very much interested in hand guns and at that time had seen the sides of hammers (on guns) finished in that fashion. I found out, from talking from machinist friends of mine, that any type of abrasive chucked in a drill press would produce the desired results.

I inserted a standard lead pencil with eraser (upside down) in a drill press. Using the eraser as the abrasive I was able to duplicate the swirl pattern on the side of a WWII P-38 pistol hammer that I had.

It takes lots of practice to make the individual swirls even. The aggressiveness of the abrasive used will determine how deep in the metal the swirls are embedded. One could use some sort of a heavy felt column, shaped like a pencil, in a drill press and then use various grades of jewelers rouge to vary the depth of the pattern.

Regards, Rudy Salomon KD6NRQ

From boatanchors@theporch.com Mon Nov 4 22:10:39 1996
From: Richard Hager <rhager@millcomm.com>
Subject: Re: Metal Finishing, Swirl Patterns, Help Please
Message-ID: <327E55D7.3405@millcomm.com>

Larry Kayser wrote:

>
> Greetings:
>
> I would like to learn how the neat and orderly swirl patterns are made on
> aluminum surfaces. This was a fairly common surface finishing technique in
> the 1920's and 1930's, but has been very uncommon in the last 40+ years or so.
> I have a conservator / restoration piece that could benefit from such a
> process to bring some luster to the metal surface. Despite pouring over
> some manuals I am unable to find a sample of this surface treatment technique.
--

Hi Larry,

We routinely achieve this finish (we call it a 'satin whorl') using a plain old hand sander and fairly fine grit paper. The sander is a \$39 sears unit, I believe it's the kind that 'oscillates' rather than just going back and forth.

We move it in a circular pattern while also moving down the length of a 19" rack panel. It eats sandpaper, but produces a wonderful finish. Unlike 'straightlining' or 'timesave' finish, it does not act as a 'dust magnet' as the surface is much smoother. You DO have to practice a bit, to get the rhythm of it. So start on some scrap....

Hope this helps,
Richard

Richard Hager

+ Ah-ha! Design Group, Inc. -
+ Precision CNC Technology, since 1991 -
+ 612-641-1797, Fax: 612-641-8681 -
+ "I just like to build stuff" So... -
+ for CNC info, don't email me, call -
+ or email Ah-ha! directly. Thanks! -
+ www.gdic.com/ahha email: ahha@gdic.com -

From boatanchors@theporch.com Mon Nov 4 22:10:39 1996
From: "Ray L. Mote" <rmote@rain.org>
Subject: Newark bought by Farnell Components!
Message-ID: <Pine.SUN.3.95.961104114334.19950A-100000@coyote.rain.org>

In going through a ton of old email printouts, I came across a mention by Jim, K4CGY, of Farnell Components in W. Columbia, SC. When I called the 800 number, they answered "Newark Electronics". I asked what was up, and was told that Farnell had bought out Newark in April, but would be keeping the Newark name. I requested the Farnell catalog, as I already have the Newark. Interesting...

73.....Ray Mote, K5FKT <rmote@rain.org> Oxnard, CA ex-W6RIC

From boatanchors@theporch.com Mon Nov 4 12:49:14 1996
From: wbird@dns1.ala.net
Subject: Question
Message-ID: <M.110496.070513.93@ala.net>

This is bound to bring a smile to some faces, but you guys have got me on this one. Is "Deoxit" a specific type of cleaner, or just a generic name for all

cleaners and deoxifiers? Reason I ask is that no one in my area seems to have heard of it. If it is a product, where is it usually found? Thanks Willis T. Bird (W4WUL)

From boatanchors@theporch.com Mon Nov 4 12:49:14 1996
From: pmills@A.crl.com (Phil Mills)
Subject: Re: Question
Message-ID: <199611041356.AA27428@A.crl.com>

>This is bound to bring a smile to some faces, but you guys have got me on this
>one. Is "Deoxit" a specific type of cleaner, or just a generic name for all
>cleaners and deoxifiers? Reason I ask is that no one in my area seems to have
>heard of it. If it is a product, where is it usually found? Thanks Willis T.
>Bird (W4WUL)

>

DeoxIT D5 is the formal name and it is made by Caig Laboratories,
16744 W. Bernardo Dr., San Diego, CA 92127-1904. E-mail is
caig123@aol.com, URL is www.caig.com, tel is 619-451-1799....all
this info is straight off the can.

It is usually found in the finer electronics parts emporiums...

73,
Phil

.
Phil Mills, AB5TH **** Wanted -- 1957 ARRL Handbook ****
pmills@a.crl.com
713-992-5762
Friendswood, TX (south of Houston)

From boatanchors@theporch.com Mon Nov 4 12:49:14 1996
From: "Jim Berry" <basalop@eskimo.com>
Subject: Re: Question
Message-ID: <199611041403.GAA07792@mail.eskimo.com>

> Date: Mon, 4 Nov 1996 07:04:26 -0600 (CST)
> Reply-to: wbird@dns1.ala.net
> From: wbird@dns1.ala.net
> To: Multiple recipients of list <boatanchors@theporch.com>
> Subject: Question

> This is bound to bring a smile to some faces, but you guys have got me on this
> one. Is "Deoxit" a specific type of cleaner, or just a generic name for all

> cleaners and deoxifiers? Reason I ask is that no one in my area seems to have
> heard of it. If it is a product, where is it usually found? Thanks Willis T.
> Bird (W4WUL)
>

I have similar question. I stopped at several "real radio stores" this weekend, but they could not help me. One fella knew of the product, but they did not sell it. If someone out there in BA land will pass along the info on where to buy some it would be appreciated by me also. I know there have been all kinds of discussions in the past about this product, but I did not save any of it.

73 Jim

Jim Berry K7SLI. QTH: Marysville, Wa (Near Seattle)
Email: basalop@eskimo.com FAX: 360-659-1360
Ham Digital: K7SLI @ K7SLI.#NWWA.WA.USA.NA

From boatanchors@theporch.com Mon Nov 4 12:49:14 1996
From: jeffa@ix.netcom.com (Jeff Anderson)
Subject: R-390A Repair Question...
Message-ID: <199611041257.EAA26653@dfw-ix7.ix.netcom.com>

How do you remove the covers of the resonant circuit cans in the RF section? There might be a problem in my first IF (Z213 cans - one of the three cans does not want to peak), and I'd like to be able to probe the Z213 resonant circuits without having to pull the RF subchassis.

It *looks* like you simply press in the metal tabs on the two opposite sides and pull the covers up, but before I attempt this I'd like to be sure. The last thing I need is to damage something!

Thanks for any help,

- Jeff, WA6AHL

From boatanchors@theporch.com Mon Nov 4 12:49:14 1996
From: "William B. Ross" <billross@txdirect.net>
Subject: Re: R389/URR LF RECEIVER
Message-ID: <327D7A78.20DE@txdirect.net>

The specific work of the Army Security Agency is Secret. Sufficient to say that they monitored numerous frequencies of interest to the United States Army for a range of purposes. Modifications on any device for

the Security Agency could have been their contract for similar modifications to those devices of other agencies in order to maintain their equipment within the Agency during any work performed on it. Or it might have been a modification that was performed only on Agency devices for a specific purpose of its own. Or it may be a modification to reverse a modification perviously made by the Agency in order to sanitize it for release through surplus channels.

In other words - Who Knows.

Bill Ross K5LLK

From boatanchors@theporch.com Mon Nov 4 22:10:39 1996
From: mknudsen@lucent.com
Subject: Re: R390A newbie questions, and related topics...
Message-ID: <9611041900.AA02931@bock.ih.lucent.com>

Gee Larry, hard to believe you went this long without an R390A.
'Course that's waht you're saying to yourself too, sounds like... :-)

We had a big rap about tube shields a while ago, and it sounds like you have the special IERC brand heat-radiating variety. Besides being dull black, they have lots of little fingers inside to press against hte glass and conduct heat out. Do put those on the hotter tubes, they actually help.

Plain shiny shields are much worse than nothing -- if you lack a full set of IERC jobs, then don't put p[lain shiny shields on anything.

There are only a half dozen tubes that need shielding for electrical reasons, mostly oscillaotrs and mixers. Certainly not the rectifiers.

Sounds like your PT0 calibration error does not just increase linearly from one end to the other. In which case you must take apart the PT0 and tinker with its guts. I haven't tried this, but others can help.

I too would like to hear from someone who's fed a trully balanced antenna into their R390A's balanced input. Attempts with unbalanced antenna feeds, even thru a balun, always show the balanced input to place second compared to the single-ended. At least in my shack.

73 es congrats, mike k aa9rg

From boatanchors@theporch.com Mon Nov 4 22:10:39 1996
From: "John H. Dilks III" <oldradio@worldnet.att.net>
Subject: Radio Auction Results

Message-ID: <19961104232732.AAA29982@LOCALNAME>

To All,

The Auction results from the NJ Antique Radio Club Auction, held on Oct 5, 1996, are now posted on the NJARC web page. [Just posted Nov 1st.] Look for the "BoatAnchors" category. Also check out the "Publications & Books" categories.

Additionally the AWA Auction results with BA's are also listed there.

Both of these results are courtesy of Ludwell Sibley, KB2EVN, Author of "TUBE_LORE", the new book on tubes. You can check this out on the web site too, along with a book review.

<http://www.globalent.net/oldradio>

73' John Dilks, K2TQN

```
.=====
|      73's from John H. Dilks, K2TQN, oldradio@worldnet.att.net      |
|      .^.      Collector of early Wireless Radios & Books.      .^.|
|      ( ~ )    Always looking for well-made Home-Brew Radios.    ( ~ )|
|      ___[_]___ Member of the New Jersey Antique Radio Club  ___[_]___|
|      Meets the second Friday of each month at 7:30 p.m. in Freehold, NJ |
|=====|
|      NJARC is on the WEB - http://www.globalent.net/oldradio      |
|      Bringing Radio History to Everyone. - Check us out!      |
|=====|
```

From boatanchors@theporch.com Mon Nov 4 12:49:14 1996

From: Glenn Finerman <GFINER@nms.com>

Subject: REPLY TO THE LIST PLEASE!

Message-ID: <s27dc1e8.002@nms.com>

Hello again Collins Fans!.

I received the following comment in a private E-mail from WB6ZWC regarding my post about the 51S-1 6kc filter mods.

re>Glenn: I would like to read the communications on this possible mod.
>Mine has the the LC arrangement also.

You'll notice the gentleman who sent the above comment, wants to read the thread on this topic but he can't because the comments have mostly been private emails.
I received some very interesting and informative comments from quite

a few of you on this thread. Unfortunately they were mostly private emails, and I've been warned by Jack that forwarding or copying private Emails to the list is a no-no. I'm sorry but I don't have the time to make a separate request to everyone who sends me a private email to find out if it's ok to copy their comments to the list. If you have anything to say, please POST IT TO THE LIST!!!

Many times I've seen an interesting thread die because the participants have taken the discussion private.

I don't want anyone to think I don't appreciate private emails cauz I really do!, but if all the comments are kept private, the rest of the list members and archive users can't benefit from the exchange of knowledge.

Of course I'm NOT referring to deals on radios, haggling on prices, money, off-topic stuff, etc..That SHOULD be private email fodder.

List members have an enormous amount of useful knowledge to share. Let's make sure it's available to those who want it!

Thanks.....73.....Glenn N2BJG gfiner@nms.com

From boatanchors@theporch.com Mon Nov 4 12:49:14 1996

From: Larry Godek <AZCOT@gnn.com>

Subject: SCR-AN-183/283

Message-ID: <199611040200.VAA20392@mail-e2b.gnn.com>

Someone was looking for some information on the above named set. I have the original instruction books for them dated 10-16-40. If you need something from them, drop me an e-mail, not here though.

Larry Godek
AZCOT@gnn.com

Gilbert, AZ. 85233

From boatanchors@theporch.com Mon Nov 4 22:10:39 1996

From: "Ray L. Mote" <rmote@rain.org>

Subject: Sources: DeOxit D5, phenolic rods/tubes/sheets

Message-ID: <Pine.SUN.3.95.961104115846.19950B-100000@coyote.rain.org>

DeOxit D5: Easiest way is to call Antique Electronic Supply in Tempe, AZ at (602) 820-5411 or FAX (800) 706-6789. If you don't have their catalog, you *need* to get it!

Phenolics: (1) Try your local plastics shop; phenolic is frequently

sold right alongside the plastics.

- (2) Small Parts, Inc. (as mentioned in a previous post)
- (3) McMaster-Carr Supply Co. in Santa Fe Springs, CA. Call 'em at (310) 692-5911. They're really good about small orders & handle 'em *fast*! The catalog is humongous. They stock rod/tube/sheet plastics (all types including Delrin, Teflon, Polystyrene, etc.) and even rubber. Also steel, aluminum, brass, etc. And damn near everything else you can think of in the way of industrial supplies. Need a replacement for that AN/GRC-9 or AN/PRC-10 case latch -- they've got it.

73.....Ray Mote, K5FKT <rmote@rain.org> Oxnard, CA
(Just another satisfied customer)

From boatanchors@theporch.com Mon Nov 4 12:49:14 1996
From: Dave Wood <WB4KPD@coastalnet.com>
Subject: SX-110 manual
Message-ID: <199611041437.JAA16515@abaco.coastalnet.com>

Will the gentleman who need the copy of the SX-110 manual please contact me directly via e-mail. Copy is awaiting shipment. Dave

From boatanchors@theporch.com Mon Nov 4 12:49:14 1996
From: Glenn Finerman <GFINER@nms.com>
Subject: T-47 LF oscillators -Reply
Message-ID: <s27dd260.010@nms.com>

Lon K5JV wrote;

re>There are two LF oscillator modules for the T-47. They cover
>different ranges but either unit will work for 160 meter operation.

Ok on the LF osc. Lon. Would that be crystal control or would VFO operation still be possible with the LF oscillator installed?

Thanks.....Glenn N2BJG gfiner@nms.com

From boatanchors@theporch.com Mon Nov 4 22:10:39 1996
From: Bill Meara <74537.1100@CompuServe.COM>
Subject: TNX to George, KC5WBV
Message-ID: <961105010857_74537.1100_EHH47-2@CompuServe.COM>

One of the nicest things about this list is that it represents a cyberspace continuation of that old helpful spirit that led hams to help other hams. Case in point: I needed a manual for my Heath Twoer. One message to the list and George, KC5WBV came up with the copy. FB George! TNX OM.
73 Bill N2CQR

From boatanchors@theporch.com Mon Nov 4 22:10:39 1996
From: don merz <71333.144@CompuServe.COM>
Subject: Tubes WTB & Trade
Message-ID: <961104222121_71333.144_DHB62-3@CompuServe.COM>

Tubes Wanted, Tubes To Trade or Sell

CONTACT: Don Merz, N3RHT: 47 Hazel Drive, Pittsburgh, PA 15228.
412-234-8819 (weekdays, EST or leave a message anytime).
71333.144@compuserve.com

I prefer to trade tubes for tubes. But I have other trade items available. I gurantee any tube to be good when it reaches you and I ask the same in any trade.

TUBES WANTED

4H-4C 6GK6(need 3) 6HA5(need 2) 6HS6 7Q7 7R7 801 5647
5899 7360

WANTED: BRITISH TUBES: ARP12 AR8 ATP4

TUBES FOR TRADE: Mostly Used, All Tested And Guaranteed In Good Condition. These are all types that I use in my gear but I have accumulated too many spares of each type.

| | | |
|-------|------|-------|
| 2E24 | 6CB6 | 24 |
| 5U4G | 6L6G | 26 |
| | 6L6M | 27 |
| 6AQ5A | 6SN7 | 12BE6 |

| | | |
|------|-------|-----|
| 6DQ6 | 12JB6 | 80 |
| 6V6 | 12V6 | 955 |

TUBES FOR SALE OR TRADE: USED, GUARANTEED (except NIB=New In Box)

6AC7: Subminiature, NIB: \$4
 6AD7: Subminiature, NIB: \$4
 12BA7: NIB RCA: \$4 each, 2 to sell
 Collins branded 807 tube, used, good. \$13
 7199 (2 left): \$4 each
 845 tubes (used): 1930's RCA modulator tube. These all work but they are used and have low emission. \$8 each (6 to sell)
 832A tubes, NOS in JAN boxes: \$3 each (2 to sell)
 1614 tubes, used, good: \$7 each
 1619 tubes, used, good: \$2 each
 Mullard EL-34 Tube. Used, good: \$7
 Mullard EZ-81/6CA4 tube. New in box. \$4
 1V, Super Silvertone 6CX, ST: \$2
 41, 4 mixed brands, ST: \$4 each
 75, 5 mixed brands, ST: \$4 each
 78, 6 mixed brands, ST: \$2 each
 81, Cunningham balloon: \$10
 85, 2 mixed brands, ST: \$2 each
 6A7, 6 mixed brands, ST: \$2 each
 6F7, ST: \$2
 12A7, ST: \$2

BALLAST TUBES--Only one of each available unless noted.

165.R4: Raytheon large ST glass tube: \$4
 165.R4: 4-pin small ST glass tube. No manufacturer. Used: \$4
 115.46: Fada brand, octal metal, used: \$4

Below ballast tubes are new-in-box, all metal octal types. \$4 each
 CLAROSTAT: K-42-E, K-49-L (2), L55C (2), L55-S2, L55-S3
 JFD: 100-77, 100-79, L55B

From boatanchors@theporch.com Mon Nov 4 12:49:14 1996
 From: Glenn Finerman <GFINER@nms.com>
 Subject: re:using other filters for the 75S3B
 Message-ID: <s27ddb75.016@nms.com>

I would like to hear from you folks who've tried this very interesting alternate to the expensive factory original filters for the Collins S-line. Does anyone have the doc's on this mod as described by Steve in his post?

Steve wrote;

re>Some time ago there were articles in the Collins Journal and
>the Collins Collector that described using a Yaesu or
>Kenwood 455 Khz 500hz Cw filter in this radio. The article described
>a very simple 1 transistor impedance buffer between the filter and
>the IF. I have the filter tacked in without this transistor amp
>and even that will work acceptably although the mismatch causes
>some loss. I have heard the results with the setup the way the
>article describes and it works very well.

Thank you Collins fans!.....73.....Glenn N2BJG
gfiner@nms.com

From boatanchors@theporch.com Mon Nov 4 22:10:39 1996
From: "Barry L. Ornitz" <u856010@eastman.com>
Subject: Re: Vacuum Systems (HB Tubes)
Message-ID: <Pine.ULT.3.91.961104183814.26162B-1000000@dua150.kpt.emn.com>

On Fri, 1 Nov 1996, Mike Knudsen (KA9EGW) wrote:

> So, what materials are/were getters made from? Why not just pump it as dry
> as possible w/HB technology, and put in a bigger getter (for the tube size)
> than was typical in production tubes?

Getters have a very limited gas removal capacity. Rosebury (full reference given in an earlier post) discusses this and gives two tables of gettering capacity for different materials. A real problem with getters is that they must be fired in such a way as to coat the glass surface of the tube WITHOUT coating any of the tube elements themselves. If you will examine some tubes closely, you may note some nickel "gates" or shields to prevent the sputtering of conducting films on the tube stem or support structures. Getters do NOT remove the noble gases like argon, helium, krypton, or neon. Argon typically makes up approximately 1% of our atmosphere so it will always be present.

> Were any getters made from materials available on the open market?

Yes, but the processing is unusual. Barium is the most common material, either pure or in alloy with aluminum or magnesium. These alloys must be freshly distilled and processed under vacuum to protect them from the atmosphere. It was common to encase the getter material in a nickel sheath with a thinned-down, boat-shaped zone, cut to the proper length with the cutting serving to seal the ends. RF induction heating was typically used to "fire" the getter.

Rosebury makes an interesting note about the appearance of getters too.

"The vacuum pressure in the tube at the time of flashing the getter will determine the appearance and condition of the condensed deposit. Very slow heating of the getter results in adsorption of most of the residual gas in the tube before much condensation takes place, so that the pressure is actually very low during the bulk of the condensation which, under these conditions, presents a bright mirror appearance. On the other hand, if the temperature of the getter is raised very rapidly, condensation occurs before the getter action can operate completely, and this results in a discolored mirror appearance. Flashing of the getter in an inert atmosphere, such as argon, produces a black deposit which is not contaminated but porous and light-absorbing."

While barium metal is readily available today, I suspect that the clad getter wire is no longer made in the USA.

73, Barry L. Ornitz WA4VZQ ornitz@eastman.com

From boatanchors@theporch.com Mon Nov 4 22:10:39 1996

From: mashaum@fcg.net (Mark Shaum)

Subject: Re: Vibroplex Presentation Gold Plating

Message-ID: <M.110496.171059.01@NE9G>

> I'd appreciate some advice from key collectors. First, I've just picked up
> a Vibroplex Presentation, serial number 188K, which seems to date it about
> 1954 as best as I can tell. It's in perfect shape, except that the gold on
> the top plate is rubbed off, where previous owners rested their fingers.
> Should I get the top plate replated, or is it best to leave the key in
> original form. Is there any rule of thumb to follow regarding collectable
> keys with respect to replacing good, but worn looking parts? It would be
> fairly easy to renovate this key so it looked new, but I'm not sure that's
> the wise thing to do. Any advice?
>

I still have my Presentation, a Xmas gift from my folks to celebrate my upgrade to General class in '67. Not knowing that the gold plate was extremely thin, I caused a couple 'bare' spots several years back while polishing. When I asked about a year or so ago, a replacement gold plated top plate was available from Vibroplex for under \$100.00, which is about half of what I was quoted by a precious metals plating shop for removal of existing gold (with credit applied), and application of a new base plate and final gold plate. I've been using the unit as an all chrome version, but am still thinking about ordering a replacement gold plate.

73! - Mark, NE9G

Still looking for a SK-500 or SK-510 socket for the 4-1000A/3-1000Z

Mark Shaum, NE9G
mashaum@fcg.net

From boatanchors@theporch.com Mon Nov 4 12:49:14 1996
From: cmthomp1@facstaff.wisc.edu (Clark M. Thompson)
Subject: Viking II question
Message-ID: <199611041520.JAA20482@audumla.students.wisc.edu>

Hello all,

On Saturday I attended the Milwaukee Repeater Association's "Friendly Fest." They made all us buyers wait out in the cold until exactly 8:00-- not too friendly!

Here's what I saw in the boatanchor category:

Hallicrafters SR-150 & power supply, good cond. \$100 (just missed this)

Heath SB-104A, power supply & scope, excellent cond. \$390 (unsold)

Drake 2B/2BQ, vry good cond. \$225 (unsold)

Heath Apache, fair cond. \$200 (unsold)

Johnson Viking II, 122 VF0, 275W Matchbox, LP filter and lotsa extra tubes, and all manuals, EXCELLENT cond. \$240 (this went home with me!)

About 90 minutes after getting home, I had it on the air. Audio reports are excellent! I think this is a new record for me for how quickly after getting a new boatanchor home I have it on the air.

All the pieces are almost flawless. I didn't even have to remove crud from the knobs! The owner had had it for 25 years-- he had bought it used from Amateur Electronic Supply in Milwaukee. It's all original, including paper caps.

And now for the questions...

I used alcohol and Q-Tips to clean the roller inductor, yet I still hear some arcing when tuning. Once I find the dip, all seems fine. There was some kind of dark gray oily substance on the rod that the roller is on. Should I use some sort of lubricant on this? Any suggestions on stopping the arcing?

The other question is about operation with the VFO. When I'm operating phone, I turn the mode switch to CW to spot. When I return the mode switch to AM, the spot signal disappears, but there is a weaker carrier about 4-5 kHz higher than the spot freq. with a T7 note. This signal also tunes with the VFO. If I change bands on the VFO, and then return it to the original band, this "phantom" signal disappears. If I transmit or spot the VFO again, the strange carrier comes back. I tried different bands, and it happens on 160, 80 and 40. I've not tried higher freqs. I checked connections to the VFO and all seems normal. When I look at the meter, there is a very small amount of buffer current present when this signal is on. I've substituted the 6AU6 oscillator and the 6AQ5 buffer/multiplier tubes with no change. I suspect something in the keying circuit. Any ideas?

This phenomenon doesn't happen when using a crystal.

Thanks in advance,

73 de Clark, KD9QI

cmthomp1@facstaff.wisc.edu

From boatanchors@theporch.com Mon Nov 4 12:49:14 1996
From: Joe Serocki <JSEROCKI@allstate.com>
Subject: Viking II question -Reply
Message-ID: <s27db905.020@allstate.com>

I have found that auto brake cleaner is the best cleaner around, BUT:

be careful, it can be damaging to plastics, papers, etc.
it's EXPLOSIVE, as in very. let it dry before even attempting to fire up the rig.
it really smells so use it outside.

From boatanchors@theporch.com Mon Nov 4 12:49:14 1996
From: w4bld@juno.com (Robert B. Kerby)
Subject: WTB B&W Mkr Plates 3881 & 3829
Message-ID: <19961104.105748.5071.2.W4BLD@juno.com>

Hi Gang - I need two B and W Marker plates for final pi assemblies. They are both for 80 -10 and have the following numbers: 21/2" is 3881 and 31/2" is 3829. I can k make these in plastic, but would prefer the original if possible. Thanks for your efforts on my behalf. This will help me finish one and get parts for another home-brew project.

Robert B. Kerby - W4BLD
Post Office Box 991
Waynesboro, VA 22980
(540)942-4356 w4bld@juno.com
(I collect Gonset HF gear and Elmac)

From boatanchors@theporch.com Mon Nov 4 12:49:14 1996
From: flegler@pilot.msu.edu (Stanley L. Flegler)
Subject: RE: WTB Phenolic
Message-ID: <199611041711.MAA133407@pilot08.cl.msu.edu>

Small Parts, Inc. has sheets and rods, but no tubes. They can be reached at 800-220-4242.

From boatanchors@theporch.com Mon Nov 4 12:49:14 1996
From: Eugene Rippen <soundval@foothill.net>
Subject: WTB Phenolic, AND ?
Message-ID: <327E3176.4453@foothill.net>

I would like to buy some Phenolic Rods, Tubing, and Sheets.
Also want some 4 to 6 prong coil forms.

Eugene Rippen, 105 Donnington, Auburn, CA 95603

From boatanchors@theporch.com Mon Nov 4 22:10:39 1996
From: Pete McCollum 04-Nov-1996 1449 -0700 <mccollum@ssdevo.ENET.dec.com>
Subject: WWII Japanese crystals
Message-ID: <9611042148.AA23230@us3rmc.pa.dec.com>

Dave Stinson wrote:

>In the boxes, I found something very exciting to a history-lover like me:
>five Imperial Japanese Navy transmitter crystals, circa WW-II.
>These artifacts can only belong to the Japanese people.
>I'm taking some photos of them to scan and then

>I'd like to send them home. However, I don't want
>to send them to some private collector were they
>will sit on a dusty shelf or be bartered for an
>old dynamotor. Can any of you point me in the
>direction of a Japanese public institution or
>museum? Perhaps the current JDF Navy has an archive? Any ideas?
>73 DE Dave Stinson AB5S
> arc5@ix.netcom.com

Hi Dave,
As it happens, I have a bunch of these xtals, in three different types of mountings. One style has a built-in screw for tension adjustment, to "tweak" the freq. Some have their original boxes. I have no idea how rare they might be - I got them all from the same place. There's still some more there. If anyone feels that these are extremely rare items, let me know and I can go back for more...

Related: I have 3 pieces of WWII Japanese commo gear: a backpack rcvr, a test oscillator, and a rcvr from an Oscar fighter. The latter two items can accept some of the xtals that I have.

My brother and I collect Japanese militaria, and my wife is a Japanese citizen, so we have some experience at translating older Japanese stuff. If you would like to know exactly what the markings on your xtals say, send me a photocopy (or e-mail a JPG/BMP/TIF file), and I'll be glad to translate them. As I recall, my xtals' markings include info about the manufacturer, date, and serial number. A few years ago, we translated the hand-written markings from many folks' Japanese flags - soldiers would carry a flag that had been signed by friends and relatives on their enlistment. They're usually signed with names, and with patriotic slogans.

BTW: I am also a serious collector of traditional Japanese swords and related art. If anybody reading this list has one, please contact me!

Regarding sending your xtals back to Japan: One place that might want them is the Museum at Yasukuni Shrine, in Tokyo. They have a bunch of WWII stuff, including a non-functional Zero. I think I have their address/phone at home somewhere.

Note that most people, and most museums in Japan will not be very interested in WWII military stuff - it's a time that most Japanese would like to forget. And, the current younger generation (in general) doesn't care "squat" about Japanese history, except maybe where the Samurai were involved. Anyway, there is a fellow sword-collector in Japan (he's an American) that I could ask for further advice on who to give the xtals to. Let me know if you want me to follow up.

Pete
mccollum@ssdevo.enet.dec.com

phone 719-548-3525

From boatanchors@theporch.com Mon Nov 4 22:10:39 1996
From: owens@stout.atd.ucar.edu (Chip Owens)
Subject: Zenith Transoceanic Question
Message-ID: <199611042216.PAA09033@atd.atd.ucar.EDU>

A friend has a Transoceanic and wants to make a battery pack
and run it off batteries. The question is: What is the proper
connection for the 3 wires terminating in the battery plug?
The colors are red, black, and blue. I would guess:

red +90v
blk gnd
blue filaments

It isn't mine so I don't want to louse it up by guessing wrong.
Anybody have one of these receivers that could offer assistance?

Thanks,
Chip Owens, NW00